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Document Listing

Document	Selected Pages	Page Range	Copies
US005552169	7	1 - 7	1
US004723953	7	1 - 7	1
US004293609	7	1 - 7	1
US004145464	9	1 - 9	1
US003888248	7	1 - 7	1
Total (5)	37	-	-

	Document ID	Title
7	US 20020058141 A1	Electroconductive plate-like t
8	US 20020035354 A1	Absorbent barrier structures h
9	US 20020013560 A1	Absorbent structure with integ
10	US 20010055680 A1	ROOFING MATERIAL

DOCUMENT-IDENTIFIER: US 20020013560 A1

TITLE: Absorbent structure with integral vapor transmissive moisture barrier

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[0056] For bonding the fibers specifically, and for structural integrity of the unitary absorbent core generally, water-based latex binders may be used. Alternatively, or in combination with a latex binder, thermoplastic binding material (fibers or powders) may be used for bonding upon heating to the melting point of the thermoplastic binding material. Suitable thermoplastic binding material includes thermoplastic fibers, such as bicomponent thermoplastic fibers ("bico"). Preferred thermoplastic binding fibers provide enhanced adhesion for a wide range of materials, including synthetic and natural fibers, particles, and synthetic and natural carrier sheets. An exemplary thermoplastic bico fiber is Celbond Type 255 Bico fiber from KoSa.

US 20020013560A1

(19) **United States**

(12) **Patent Application Publication** (10) **Pub. No.: US 2002/0013560 A1**

Erspamer et al. (43) **Pub. Date: Jan. 31, 2002**

(54) **ABSORBENT STRUCTURE WITH INTEGRAL VAPOR TRANSMISSIVE MOISTURE BARRIER**

(75) Inventors: **John P. Erspamer**, Lakeland, TN (US); **Brian E. Boehmer**, Bartlett, TN (US); **John Perry Baker**, Memphis, TN (US); **David W. Wu**, Bartlett, TN (US)

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(73) Assignee: **BKI HOLDING CORPORATION**

(21) Appl. No.: **09/854,179**

(22) Filed: **May 11, 2001**

Related U.S. Application Data

(63) Non-provisional of provisional application No. 60/204,418, filed on May 12, 2000. Non-provisional of provisional application No. 60/252,544, filed on Nov. 22, 2000.

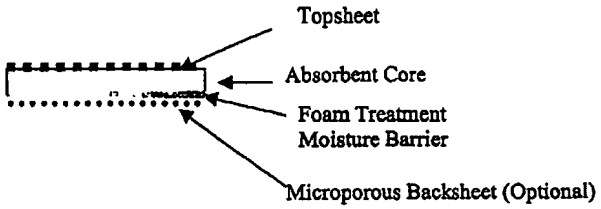
Publication Classification

(51) Int. Cl.[7] **A61F 13/15; A61F 13/20**

(52) U.S. Cl. **604/381; 604/368; 604/369**

(57) **ABSTRACT**

Disclosed is a unitary absorbent core having a basis weight of about 75 grams per square meter or greater, including a fibrous absorbent layer having an upper fluid receiving surface and a lower surface with a hydrophobic vapor-transmissive moisture barrier integral with the lower surface of the absorbent layer. Also disclosed is a process for the production of the unitary absorbent core, including the steps of (a) producing a fibrous absorbent layer having upper and lower surfaces, and (b) applying to the lower surface of the fibrous absorbent layer a hydrophobic material which at least partially coats at least some of the fibers of the lower surface of the absorbent layer.



EAST Browser - L30: (117) 23 and 29 | US 5135787 A | Tag: S | Doc: 48/117 | Format : KWIC

File Edit View Tools Window Help

	Document ID	Title
46	US 5208089 A	Fabric conditioning articles fo
47	US 5188624 A	Absorbent article with superal
48	US 5135787 A	Iced food shipping container v
49	US 5064689 A	Method of treating discontinuc

US-PAT-NO: 5135787

DOCUMENT-IDENTIFIER: US 5135787 A

Viewer: queous liquid absorbing pad

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The porous, hydrophilic outer fabric layers 12, 14 of water-absorbing pad 10 fabric perform three functions; namely, (1) expandably contain the SAP-containing web, (2) to wick and help distribute aqueous fluids over the entire area of the absorbing pad and (3) to facilitate sealing of the cut edges. The expandability should be commensurate with the expected expansion of the SAP-containg web. Various nonwoven fabrics can perform these functions. A particularly preferred outer fabric is a nonwoven fabric made from polyester homopolymer fibers and polyester copolymer (binder) fibers and/or a binder resin, the fabric surface having been treated with a wetting agent. The binder fiber and/or resin ensures adequate bonding of outer fabric 12, 14 to the SAP-containing web 16. The wetting agent aids in the wicking and distribution of aqueous liquids in pad 10. If most of the fibers of the outer layer fabric are not hydrophilic (e.g., polyesters, polyolefins), as in the preferred nonwoven outer fabric, then hydrophilic fiber, for example of wood-pulp, cellulose acetate or the like, can be incorporated into the outer fabric or the fabric can be treated with a wetting agent (e.g., cationic, anionic, nonionic or amphoteric surfactant) to impart the desired hydrophilicity. Conventional criteria and methods can be used for selecting and applying such materials to the fabric.

US005135787A

United States Patent [19]

Bair

[11] Patent Number: 5,135,787

[45] Date of Patent: Aug. 4, 1992

[54] ICED FOOD SHIPPING CONTAINER WITH AQUEOUS LIQUID ABSORBING PAD

[75] Inventor: Thomas I. Bair, Wilmington, Del.

[73] Assignee: E. I. Du Pont de Nemours and Company, Wilmington, Del.

[21] Appl. No.: 867,283

[22] Filed: Aug. 14, 1990

[51] Int. Cl.[5] F16L 3/02

[52] U.S. Cl. 428/36.1; 428/74; 428/76; 428/198; 428/219; 428/283; 428/286; 428/373; 428/402; 428/913; 426/124; 426/129; 426/393; 426/398; 220/301; 206/204

[58] Field of Search 428/36.1, 283, 74, 76, 428/283, 198, 219, 286, 287, 373, 913, 402, 407; 426/124, 129, 109, 393, 398; 220/20.5; 206/204

[56] References Cited

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4,940,621	7/1990	Rhodes et al.	426/124

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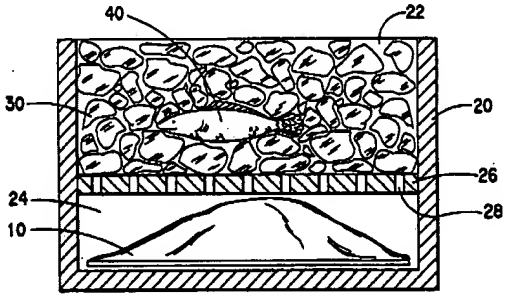
Primary Examiner—Ellis P. Robinson

Assistant Examiner—J. Weddington

[57] ABSTRACT

An iced food shipping container and a novel aqueous liquid absorbing pad for use therein are provided. The pad comprises superabsorbing polymer particles distributed in a polyester carded web contained between hydrophilic fabric outer layers. The pad can absorb more than 100 times its dry weight in water and other aqueous liquids that form during iced food shipment.

8 Claims, 1 Drawing Sheet



EAST Browser - L1: (81) (card or car | US 4706338 A | Tag: S | Doc: 80/81 | Format: KWIC

File Edit View Tools Window Help

	Document ID	Title
78	US 4758466 A	Foam-fiber composite and pro
79	US 4722857 A	Reinforced non-woven fabric
80	US 4706338 A	Apparatus for forming fibre w
81	US 4548856 A	Method for forming soft, bulky

US-PAT-NO: 4706338

DOCUMENT-IDENTIFIER: US 4706338 A

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Abstract Text - ABTX (1):

An apparatus for forming fibre webs including a first component and a second component in the form of two textile fibres differentiated by their average fibre length or a textile fibre and wood pulp, said apparatus including a card means having a discharge zone, means for feeding said second component to said discharge zone, and means for condensing the fibres in said discharge zone whereby a highly uniform fibre web is obtained.

Brief Summary Text - BSTX (6):

According to the present invention, this object is obtained by providing an apparatus for forming fibre webs including first and second components in the form of at least two textile fibres differentiated by their average fibre lengths or a textile fibre and wood pulp, characterized by comprising card means having a discharge zone, means for feeding said second component to said discharge zone and means for condensing the mixed fibres in said discharge zone, whereby a highly uniform fibre web is obtained.

Detailed Description Text - DETX (1):

Referring now more particularly to the drawing, one embodiment of an apparatus for forming heterogeneous fibre webs at elevated production velocities basically comprises a high velocity card means 2 and a pulp mill 4 coupled so as to deposit intimately mixed textile fibres and wood pulp on a conveyor belt 6 to form a fibre web 8.

United States Patent [19]

Anspach

[11] Patent Number: 4,706,338

[45] Date of Patent: Nov. 17, 1987

[54] APPARATUS FOR FORMING FIBRE WEBS

[75] Inventor: Jean M. H. Anspach, São José dos Campos, Brazil

[73] Assignee: Chicopee, New Brunswick, N.J.

[21] Appl. No.: 839,019

[22] Filed: Mar. 13, 1986

[30] Foreign Application Priority Data

Mar. 13, 1985 [BR] Brazil 8501093

[51] Int. Cl.⁴ D01G 15/40; D01G 15/46

[52] U.S. Cl. ..... 19/105; 19/106 R; 19/145.7; 19/302; 19/304

[58] Field of Search ..... 19/145.5, 145.7, 302, 19/106 R, 105, 304

[56] References Cited

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FOREIGN PATENT DOCUMENTS

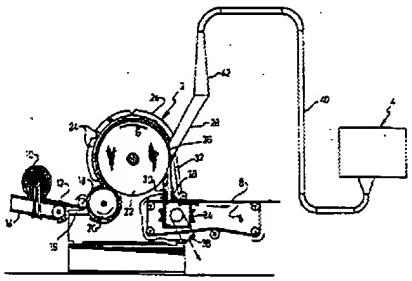
0851152 7/1960 United Kingdom ..... 19/106 R

Primary Examiner—Louis K. Rimrodt

[57] ABSTRACT

An apparatus for forming fibre webs including a first component and a second component in the form of two textile fibres differentiated by their average fibre length or a textile fibre and wood pulp, said apparatus including a card means having a discharge zone, means for feeding said second component to said discharge zone, and means for condensing the fibres in said discharge zone whereby a highly uniform fibre web is obtained.

4 Claims, 1 Drawing Figure



EAST Browser - [8 (142) | and 7 | US 6270873 B1 | Tag: S | Doc: 21/142 | Format: KWIC

File Edit View Tools Window Help

	Document ID	Title
19	US 6395957 B1	Dual-zoned absorbent webs
20	US 6358752 B1	Liposome-enhanced test devic
21	US 6270873 B1	Absorbent pad
22	US 6162327 A	Multifunctional tissue paper pi

US-PAT-NO: 6270873

DOCUMENT-IDENTIFIER: US 6270873 B1

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Detailed Description Text - DETX (10):

In FIG. 3, the bottom sheet 13 is a heavier weight heat fusible paper which is a blend of cellulosic and thermo plastic fibre and can have a weight of between 5-100 g per square meter. Typically, the paper has 22% thermo plastic fibre and 78% cellulose fibre and is resin bonded to have a good wet strength. The paper has a good wetting and wicking action to assist in drawing fluids to the superabsorbent polymer.


US005270873B1

(12) **United States Patent**
Darnett

(10) **Patent No.: US 6,270,873 B1**
(45) **Date of Patent: Aug. 7, 2001**

(54) **ABSORBENT PAD**

(75) Inventor: Rodney Darnett, Queensland (AU)

(73) Assignee: Sealed Air Corporation (US), Saddle Brook, NJ (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: 09/125,615

(22) PCT Filed: Feb. 19, 1997

(86) PCT No.: PCT/AU97/00086

§ 371 Date: Sep. 2, 1998

§ 102(e) Date: Sep. 2, 1998

(57) PCT Pub. No.: WO97/30909

PCT Pub. Date: Aug. 28, 1997

(30) **Foreign Application Priority Data**

Feb. 22, 1996 (AU) PN8348
Mar. 27, 1996 (AU) PN8849

(51) Int. Cl.[7] B32B 1/06

(52) U.S. Cl. 428/76

(58) Field of Search 428/68, 72, 73, 428/74, 76; 62/259.3; 604/355; 607/114

(56) **References Cited**

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5,274,863 * 1/1994 Tokuhashi 5/644
5,789,076 * 8/1998 Ishara 428/315.9

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11573/95 8/1995 (AU) .
0 353 334 A1 2/1990 (EP) .
WO 90/3335 4/1990 (WO) .

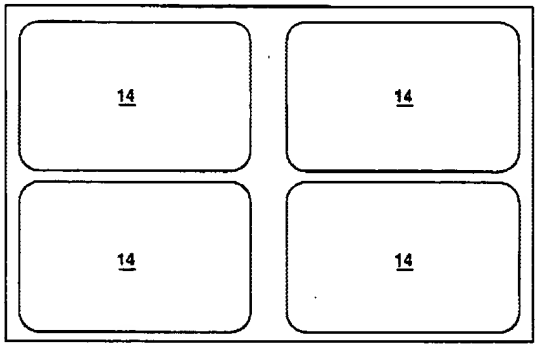
* cited by examiner

Primary Examiner—Alexander S. Thomas
(74) *Attorney, Agent, or Firm*—Rupert B. Hurley, Jr.

(57) **ABSTRACT**

An absorbent pad has a top sheet and a bottom sheet, the sheets being joined to form at least one cell, an absorbent located within the cell, at least one sheet being formed of a liquid impermeable material containing microperforations. The top and/or bottom sheets may comprise multiple layers of different materials, e.g., plastics, non-woven fabrics, paper.

21 Claims, 19 Drawing Sheets



US-PAT-NO: 6270873

DOCUMENT-IDENTIFIER: US 6270873 B1

TITLE: Absorbent pad

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Detailed Description Text - DETX (10):

In FIG. 3, the bottom sheet 13 is a heavier weight heat fusible paper which is a blend of cellulosic and thermo plastic fibre and can have a weight of between 5-100 g per square meter. Typically, the paper has 22% thermo plastic fibre and 78% cellulose fibre and is resin bonded to have a good wet strength. The **paper has a good wetting and wicking** action to assist in drawing fluids to the superabsorbent polymer.

US-PAT-NO: 5552169

DOCUMENT-IDENTIFIER: US 5552169 A

TITLE: Food package adapted for microwave or other cooking

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Claims Text - CLTX (25):

19. An absorbent pad according to claim 14 wherein said lower layer is formed of wet strength tissue **paper for increased permeability and wicking** of liquid into said pad to increase the rate of absorption thereof.

US-PAT-NO: 4723953

DOCUMENT-IDENTIFIER: US 4723953 A

TITLE: Absorbent pad

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Detailed Description Text - DETX (5):

The **wicking layer 12 may be of paper** toweling and the like in which a liquid will migrate very rapidly to the marginal edges of the air bubble layer 10 and over the edges 14 to a lower absorbent layer.

Detailed Description Text - DETX (9):

As best seen in FIG. 4, the preferred embodiment of the present invention comprises an uppermost layer 28 of Pellon. The next layer 30 is cellulose tissue. The **wicking layer 12 is of paper** toweling which completely surrounds the air bubble layer 10 having a cushion function. The absorbent layer 15 is of cotton wadding and the bottom layer 16 is of plastic.

Detailed Description Text - DETX (10):

In use, the embodiment shown in FIG. 4 receives liquids via the cellulose tissue layer 30 which transfers the excess liquid to a Pellon layer 28. The excess liquid from layer 30 is delivered to the Pellon layer 28 and then to the upper **paper towel wicking** layer 12 which wicks some of the liquid around the edges 14 of the air bubble layer 10 while the bulk of the liquid is delivered by the upper wicking layer 12 to the air bubble layer 10. The air bubbles 22 projecting upwardly present a barrier pattern to the incoming liquid and breaks the liquid stream into a multitude of small streams or riverlets which migrate to the edges 14 and discharge into the lower wicking layer 12a for even discharge across the surface of the absorbent layer 15. The bottom layer 16 prevents liquids from escaping the absorbent layer.

FAST Browser - Lit. (142) 1 and 7 | US 4293609 A | Tag: S | Doc: 125/142 | Format: KWIC

File Edit View Tools Window Help

	Document ID	Title
123	US 4333465 A	Hygienic sanitary towel
124	US 4301139 A	Multilayer column chromatogr
125	US 4293609 A	Flexible absorbent laminates
126	US 4279519 A	Dot matrix printing device em

US-PAT-NO: 4293609

DOCUMENT-IDENTIFIER: US 4293609 A

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Detailed Description Text - DETX (27):

The moisture content of the laminates must be reduced from their normal content of about 14% moisture to less than 8% and preferably in the range from 1-6%. If the moisture content is greater than about 8%, there is substantially no crushing or shattering of the film in the subsequent cracking zone since the film remains flexible. If the moisture content is less than 1% moisture, there is substantial tearing or rupturing of the wicking substrates such as the fibers of the paper tissue mats.

FLEXIBLE ABSORBENT LAMINATES

CROSS REFERENCE TO RELATED APPLICATION

This application is a continuation-in-part of Ser. No. 55,566, filed July 9, 1979 now abandoned.

BACKGROUND OF THE INVENTION

This invention relates to flexible absorbent laminates wherein a lightly crosslinked or water-swellable hydrophilic polymer film is bonded to wicking substrates, dried, and crushed to give laminate flexibility and high water absorption rates.

It is known from U.S. Pat. No. 3,669,822 dated June 13, 1972 that tissue/polyethylene film/tissue laminates can be crimped or embossed to give an improved hand or flexibility or tissue-like feel.

It is also known from French Pat. No. 2,375,985 dated Sept. 1, 1978 that non-woven fiber sheet/tissue/absorbent layer/tissue/polyethylene film laminates can be made flexible with adhesion to the film by adding an adhesive between the tissue and the polyethylene film followed by transverse creasing or crimping.

In U.S Pat. Nos. 4,117,184 and 4,176,667, it is disclosed that tissue/aerated absorbent film/tissue laminates can be prepared.

While the laminates disclosed in U.S. Pat. No. 4,117,184 have good absorption rates for water, urine, and other body fluids or exudates they have a tendency to become brittle and inflexible in atmospheres of low relative humidity. The result is an unacceptable rattle sound when the laminate is flexed and the laminate has a stiff or board like feel.

SUMMARY OF THE INVENTION

It now has been found that laminates comprising a central crushed film of a lightly crosslinked or water-swellable hydrophilic polymer combined with wicking substrates can be prepared which are both highly absorbent and flexible at both high and low relative humidities.

The present invention is thus a flexible hydrophilic absorbent laminate which has a rapid absorption rate and is flexible at low and high relative humidities which comprises

(a) a central, substantially discontinuous and crushed film consisting of a water-swellable hydrophilic polymer, and

(b) a layer of wicking substrates bonded to both sides of said film.

While the absorbent film can be a solid film as in U.S. Pat. No. 4,076,673, dated Feb. 28, 1978, it is preferably an aerated film as disclosed in U.S. Pat. No. 4,117,184.

A further aspect of the present invention is a method of making the above laminates which comprises the steps of, reducing the moisture content of a laminate of a lightly crosslinked hydrophilic polymer film with wicking substrates to less than 8% by weight by passing said laminate through a drying zone, and passing said dried laminate through a crushing or cracking zone wherein said film is crushed into a plurality of pieces which remain substantially laminated to said substrates.

The laminates are useful to make absorbent articles such as baby diapers, adult diapers for incontinent patients, and the like since the laminates and/or articles readily absorb aqueous solutions such as blood, urine, and other body exudates. The absorbent articles contain one or more layers of wicking substrates such as nonwoven fiber mats, tissue wadding, or cellulose fluff together with a water impermeable bottom sheet such as polyethylene and a water permeable top sheet such as a non-woven fiber mat.

BRIEF DESCRIPTION OF THE DRAWING

The drawing is a photographic reproduction of one species of the present invention.

FIG. 1 shows a view taken with a scanning electron microscope of the laminate with the top layer of paper tissue fibers partially pulled back to expose the crushed film underneath. The bottom layer of paper tissue fibers is clearly evident beneath the crushed film.

FIG. 2 is an enlarged view of the center portion of FIG. 1 showing in greater detail the cracers and bubbles in the aerated film and the bonding of the film to the fibers.

DETAILED DESCRIPTION

The water-swellable or lightly crosslinked hydrophilic polymers useful in this invention can be any of the known hydrophilic polymers that are capable of being formed into a film. Examples of such polymers are disclosed in U.S. Pat. Nos. 3,997,484; 3,926,891; 3,935,099; 4,090,013; and 4,190,562.

The preferred hydrophilic polymers useful in this invention are polyelectrolytes and must be essentially water soluble in the salt form. Examples of useful polyelectrolytes include ammonium or alkali metal salts of homopolymers of acrylic or methacrylic acid and copolymers with one or more ethylenically unsaturated commomers.

Preferably the polyelectrolyte is a partially saponified polyacrylate polymer. The polymer before saponification is the result of reacting together a mixture of monomers which comprises (1) 30 to 92 percent by weight of an alkyl acrylate wherein the alkyl group has from 1 to 10 carbon atoms, an alkyl methacrylate wherein the alkyl group has from 4 to 10 carbon atoms, or mixtures thereof; (2) 8 to 70 percent by weight of an olefinically unsaturated carboxylic acid; and (3) 0 to 12 percent by weight of an omega hydroxyalkyl acrylate wherein the hydroxyalkyl groups has from 1 to 4 carbon atoms.

Examples of useful alkyl acrylates include methyl acrylate, ethyl acrylate, propyl acrylate, butyl acrylate, and hexyl acrylate. Examples of useful alkyl methacrylates include methyl methacrylate, ethyl methacrylate, hexyl methacrylate, octyl methacrylate and decyl methacrylate. Examples of useful omega hydroxyalkyl acrylates include 2-hydroxyethyl acrylate, hydroxymethyl acrylate, 3-hydroxypropyl acrylate and 4-hydroxybutyl acrylate.

The olefinically unsaturated carboxylic acids useful in this invention are mono or polycarboxylic acids. Examples of monocarboxylic acids include acrylic acid, methacrylic acid, crotonic acid, and isocrotonic acid. Examples of polycarboxylic acids include maleic acid, fumaric acid, and itaconic acid.

The foregoing polyacrylates are then dissolved in an aqueous alkali metal hydroxide solution. The amount of hydroxide solution employed is sufficient to saponify some of the acrylate esters to alkali metal carboxylates and to neutralize the carboxylic groups of the polyacrylate to alkali metal carboxylates so that the saponified polyacrylate polymer has from 30 to 70 weight percent alkali metal carboxylates

EAST Browser - L8. (142) 1 and 7 | US 4145464 A | Tag: S | Doc: 134/142 | Format: KWIC

File Edit View Tools Window Help

	Document ID	Title
132	US 4187076 A	Paraquat detection method
133	US 4176667 A	Disposable liquid absorbent p
134	US 4145464 A	Absorbent articles
135	US 4117184 A	Absorbent films and laminates

US-PAT-NO: 4145464

DOCUMENT-IDENTIFIER: US 4145464 A

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Brief Summary Text - BSTX (7):

It is well known to employ a wicking layer in a disposable diaper for the purpose of enhancing the lateral mobility of body liquids to achieve effective utilization of the absorbent components of said diaper. One such wicking layer is disclosed in U.S. Pat. No. 3,763,863, assigned to Johnson and Johnson. The wicking layer disclosed in that patent is a densitied, paper-like layer formed insitu on an absorbent batt of loosely compacted fibers by spraying a surface of the batt with moisture, and compressing the batt to densify the moistened surface. This manner of forming the wicking layer is disclosed in detail in U.S. Pat. No. 3,017,304, which is also assigned to Johnson and Johnson.

United States Patent [19]

McConnell et al.

[11] 4,145,464

[45] Mar. 20, 1979

[54] **ABSORBENT ARTICLES**

[75] Inventors: Albert L. McConnell, Wallingford; Richard W. Schutte, Newtown Square, both of Pa.

[73] Assignee: Scott Paper Company, Philadelphia, Pa.

[21] Appl. No.: 732,776

[22] Filed: Oct. 15, 1976

[51] Int. Cl.[2] B32B 5/14; B32B 5/16

[52] U.S. Cl. 428/171; 128/284; 428/283

[58] Field of Search ..... 128/287; 428/280-284, 428/286-291, 296-303, 321, 340, 171, 283, 167, 246, 323, 361, 320, 910, 292; 19/144.5, 145, 145.5; 15/209 R; 427/334, 365, 202; 5/3, 90, 92, 354, 334 R, 354

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3,105,491	10/1963	Harwood	128/290 R
3,597,306	8/1971	Mesek et al.	428/283
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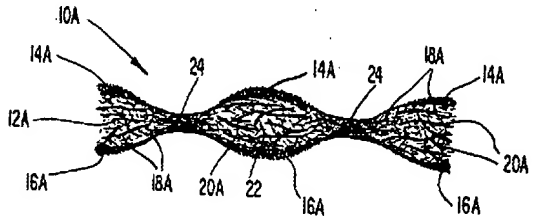
3,881,490	5/1975	Whitehead et al.	128/287
3,903,889	9/1975	Torr	128/287
3,908,659	9/1975	Wehrmeyer et al.	128/287
3,916,447	11/1975	Thompson	128/287
3,934,588	1/1976	Mesek et al.	128/287
3,938,522	2/1976	Repke	128/287
3,973,067	8/1976	Newman	428/288
3,974,319	8/1976	Albrechoff	428/283

Primary Examiner—Robert W. Michell
Assistant Examiner—V. Millin
Attorney, Agent, or Firm—Martin L. Fulgus; William J. Foley

[57] **ABSTRACT**

A nonwoven absorbent structure usable by itself, as a wiper for example, or usable in combination with other elements, such as an internal absorbent member of a disposable diaper. The absorbent structure includes a dry-formed fibrous section in which the average fiber length is about 1.2 millimeters or longer, and a liquid-transmitting layer of particulate material associated with at least one surface of the fibrous section and having a density greater than that of the fibrous section. At least 50% of the particles, by weight, are of a size that will pass through a 48 mesh screen, and the particulate material is chemically bonded together to form the liquid-transmitting layer(s). Particles of the layer(s) are located between fibers at and adjacent the associated surface(s) of the fibrous section to form a zone in which particles and fibers are intermixed. A disposable diaper in accordance with this invention has an internal absorbent member including a dry-formed fibrous section with the above-described layer of particulate material associated with only one surface thereof. The absorbent member is positioned between a liquid-pervious facing sheet and a backing sheet, and the layer of particulate material is associated with the surface of the fibrous section closest the backing sheet.

6 Claims, 6 Drawing Figures



FAST Browser - LB_(142) | rnd 7 | US 3888248 A | Tag_S | Doc_138/142 | Format_KWIC

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	Document ID	Title
136	US 4098120 A	Humidity indicating method ar
137	US 4059657 A	Calibrated anesthetic vaporize
138	US 3888248 A	Abdominal pad or surgical dr
139	US 3868052 A	MOIST TISSUE DISPENSIN

US-PAT-NO: 3888248

DOCUMENT-IDENTIFIER: US 3888248 A

Viewer Times New Roman 12 dressing

---------- KWIC ----------

Detailed Description Text - DETX (5):

Referring now to FIG. 4, if it is desired, the absorbent core material may be made of two layers of needle-punched rayon 11a, 11b or similar material as disclosed above with a central thin layer of tissue paper 35 for "wicking" fluid laterally between the two layers of absorbent core material to spread it out for greater absorption capacity of the pad before saturating it.

Fig. 4

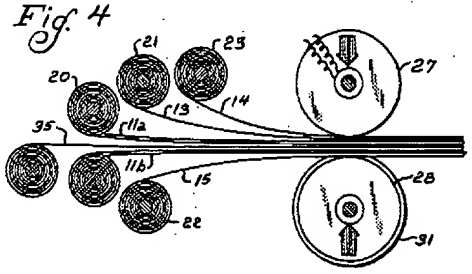
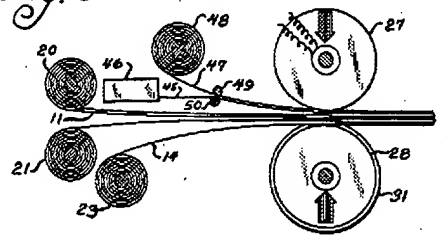


Fig. 5



US-PAT-NO: 3576039

DOCUMENT-IDENTIFIER: US 3576039 A

TITLE: ABSORBENT UNDERPAD WITH SECURING MEANS

---------- KWIC ---------

Detailed Description Text - DETX (1):

Referring to the drawings, the underpad is shown as comprising an impervious backing sheet 1, of polyethylene or equivalent plastic material, absorbent means 2 which may conveniently be quantities of hydrous calcium silicate powder enclosed in permeable **paper envelopes, a distribution layer 4, preferably of material having a "wicking**" effect to pass liquids quickly from the upper surface to the absorbent means, and a permeable upper facing 5 which may suitably be a porous nonwoven fabric. The backing sheet 1 is shown at 6 in FIG. 2, as extending around two opposite edges of the underpad, being sealed to the upper facing to form a laterally closed package. The absorbent material envelopes may be adhesively secured at suitable points to the backing sheet 1 and distribution layer 4 in order to retain all elements in their desired respective positions.

US-PAT-NO: 6270873

DOCUMENT-IDENTIFIER: US 6270873 B1

TITLE: Absorbent pad

---------- KWIC ---------

Detailed Description Text - DETX (10):

In FIG. 3, the bottom sheet 13 is a heavier weight heat fusible paper which is a blend of cellulosic and thermo plastic fibre and can have a weight of between 5-100 g per square meter. Typically, the paper has 22% thermo plastic fibre and 78% cellulose fibre and is resin bonded to have a good wet strength. The **paper has a good wetting and wicking** action to assist in drawing fluids to the superabsorbent polymer.